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…ge in relation to the port which is receiving.

In order to locate the ship's position exactly the data from at least two receiving stations must be compared and it is desirable that another station send its data to check the accuracy of the finding.

War Necessity Mothered It.

Especial attention was paid to the development of the radio direction finder during the war when many fighting ships found that fog was almost on a par with submarines as a naval menace. Experts thereupon experimented to discover a certain method of giving a ship her "reckoning" when the sun was obscured. The radio direction finder in its most modern form was the result. It is now proving its great usefulness in time of peace.

"Merchantmen are constantly using our stations to find out where they are," said a naval officer. "I should say that for one warship that calls for its bearings there are ten privately owned vessels. Our radio direction-finding stations are really becoming public service institutions."

The navy has erected and is operating stations at the entrance of almost all of the large commercial ports in the country. There are several stations near New York harbor, including Montauk Point, Fire Island, Sandy Hook and Far Rockaway. On clear days the men on duty at these posts have more or less of "sinecures," but on a foggy day they are constantly at work directing ships which have gone astray. All the listening stations transmit their information to headquarters and headquarters tells the skipper where he is.

Some elderly naval men were skeptical about the radio direction finder when the navy department first introduced the device, but one experience with the instrument usually suffices to convince them of its worth. Recently a new destroyer left Norfolk, Va. bound for Newport, R. I.—ordinarily no great feat of navigation. However, the compass was new and untried, and the captain and the navigating officer prayed for clear weather.

It Beats an Erratic Compass.

Despite their prayers they ran into a heavy fog and from the time they left Cape Henry until they sighted the reef lightship at the entrance to Newport they could see nothing. Nevertheless, the run was made without mishap, owing to the directions sent out by the finding stations, and on landing the officers, who had been skeptical, were converts. It was discovered later that the magnetic compass, by which they would have steered under the old methods might have brought them to grief, for it showed an error of more than ten degrees.

"We are handicapped in extending this work," remarked the naval officer "by lack of personnel. In fact, we've been compelled to close up one or two stations recently owing to a shortage of men. But eventually we hope to have a station at practically every moderately large port—and that I think, will cause making port in fog to be considered a very ordinary and not at all dangerous achievement."

Just Two Feet to Death.

Bowling Green, Ky.—Two feet separated Robert Fulton, oil well driller from death. His employers, a Cincinnati concern, had given up hopes of striking oil and ordered abandonment of the "dry" well. "We'll go two feet further," Fulton said. At the second foot oil was struck, and in the fire which followed Fulton was burned to death.

…-obscurement American …thin fear …oped him …ope had …g Amer… …the open …em holy …n knight …that the …ories for …n proved

Ga., sev… …is being …nd wife, …tanooga, …and of… …ls time …ves. His …second …nd wife …

…f cotton

…the most complete pictures ever taken of vatican ceremonies.

Reading When Drowsy.

To read or study when tired or drowsy is to strain the eyes to a dangerous degree, writes W. M. Carhart in Public Health. Avoid evening study whenever possible. If you are using your eyes by artificial light be sure the light does not shine directly into the eyes and try to have it come from behind and to the left side so as to avoid the harmful glare.

Says Hooch Ate Away Boil.

Hammond, Ind.—One thing for which the hooch made in the Calumet region is valuable has been discovered by Capt. Thomas Downey of the Indiana Harbor police. He raids three or more moonshine stills a week and says he knows whereof he speaks. He has been afflicted with boils and accidentally spilled some confiscated hooch on one of the boils. Pain stopped and the boil was eaten away by the fiery liquid.

He Wouldn't Stop Work for Wedding.

Detroit.—Devotion to duty prevented Nicholas Alexander, cook, from taking an hour off to get married.

His fiancee, Isabelle M. Sahaycaw, applied at the county clerk's office for a marriage license and, in response to the clerk's question as to why the bridegroom-to-be had not come, she said Nicholas was too busy.

She said further that they had agreed to marry a year ago, but they had a quarrel and Nicholas tore up the license he had taken out.

After long and mature deliberation Isabelle came to the conclusion that she had been wrong and that if she did not admit it she ran a good chance of losing Nicholas forever.

She went to him in a penitent mood and found him receptive, but on one point he was adamant. He would not leave his work for a minute to get married, and if she wanted to become his wife she had to take out the marriage license, engage a minister and bring him to the kitchen where the ceremony was to be performed. They were married.

Rooster Just Like Mother.

Winsted, Conn.—A yearling Rhode Island Red rooster owned by Elmer Robbins is brooding a number of chickens that weigh from one and a half to two pounds each. The young rooster also fills a mother's role by calling the chicks when he uncovers worms. At night the chickens huddle beneath his wings.

CUT HOME WASTE

Servants Are Responsible for Greater Part of It.

Investigations in New York Prove That Average Family Throws Away Pound and Half of Good Food Every Day.

People of average means can hardly afford in these days to keep servants. Households which formerly kept two or three now get along with one maid. Many manage with half a servant, sharing her with a neighbor. Not a few housewives have been driven to the necessity of doing their own cooking and sending the washing to a laundry.

This has meant a great deal of discomfort, but there has been an incidental gain. Waste is enormously reduced.

Servants make nearly all the waste of a household. Many housewives, deprived of "lady help," have been astonished to observe a shrinkage of their food bills, notwithstanding the present doubled and trebled prices.

When a domestic establishment employs half a dozen servants the waste is enormous. Nearly always in a house run on that scale the butler and cook "stand in" with the butcher and grocer, and their rake-off increases with the amount of food they throw away.

Recent investigations by the New York health department proved that the average family living in a private house, with one or more servants throws away a pound and a quarter of perfectly good food every day.

It was found that the average apartment house family throws away only one-fifth as much—largely, doubtless, because such families reduce domestic service to a minimum.

In the tenement districts of New York one garbage can usually suffices to hold the food refuse of 20 families. But in the "private house districts" it was found that 183 families had 173 garbage pails, or more than a pail apiece.

Examination of the 175 pails revealed 18 pounds of bread and rolls, 50 pounds of meat, 35 pounds of potatoes, 16 pounds of cereals and large quantities of perfectly edible fresh vegetables.

Always the amount of food waste varies directly with the number of servants employed. As a matter of fact, the full garbage pail seems hitherto to have been regarded in this country as a manifestation of prosperity. Not until very recently have people begun to think that possibly this was a foolish idea.

Mosquitoes and Colors.

The malaria-carrying mosquito it appears, is attracted by certain colors and repelled by others. Experiments have been conducted in a game test, one end of which was formed by large windows. Into these the sunlight poured on bright days. Large shoe basins were placed on the floor for the mosquitoes to breed in. It was immediately noticed that when a person entered the tent end in dark gray clothes, the mosquitoes settled on the cloth. When the person who entered was dressed in white flannel, they did not approach him. A number of boxes lined with cloth of various colors were placed in rows upon the floor, and it was noticed that great number of mosquitoes entered the box lined with dark blue. Fewer of the insects sought the boxes lined with the other colors, the number diminishing in this order: Dark red, brown, scarlet, black, slate gray, olive green, violet, leaf green, blue, pearl gray, pure green, light blue, ocher, white and orange. No mosquitoes whatever were found in the box lined with yellow.

Efficiency.

"Pears like Polk Sawney, that runs the store at the crossroads hain't overrid with enterprise," commented a citizen of Fiddle Creek, Ark. "Tother day, frinstance, I went there in the middle of the afternoon to buy a little something, talk a few politics, and so forth. When I sa'ntered in nobody was in sight on the place. But after I'd tromped around for a spell a sleepy voice from under the counter sorter snarled:

"'If you're a drummer that aims to sell me something, I don't want it; and if you're a customer that is figgerin' on buying something, why in fury can't you just as well come around some time when I hain't plumb yaw-w-w-wn!—wore out?'

The Fastest American Destroyers.

All American records for speed were broken by the torpedo boat destroyer Satterlee during her standardization firing over the measured mile of Rockland, Me., when she made a mile at the rate of 38.26 knots. The best previous record of 37.04 knots was held by the American destroyers Dent and Wickes. The boat also established a new record in her class for horsepower, developing a maximum of 31,223. The Satterlee, which has been in commission six months, was built by the Newport News Shipbuilding and Dry Dock company.—Scientific American.

Logical Enough.

"What is the meaning of the term 'alter ego'?' asked the principal of a preparatory school.

"The other I," was the reply given by a lad generally correct in his recitations.

"Give me a sentence containing the phrase."

"He winked his other I."

Noneefficiency.

"Tut, tut," said the fussy old gentleman to a genial panhandler. "I gave you a dime only last week."

"That's right, governor. I know you did, but I couldn't get out of town on a dime, so I'm still lingering in your midst."

Wrong Epithet.

Host—I can assure you, this meat is bully.

Ex-Soldier (shuddering)—Don't tell me it's bully beef.

Philadelphia's Early Day.

Up to 1720 hunting partridges, doves and pigeons was common in the streets of Philadelphia. Then a law was passed against the practice.

Word With Many Meanings.

The term "tonnage" in the shipping business has five meanings, according as it refers to deadweight, cargo, gross, net or displacement tonnage.

If we have not peace within ourselves it is in vain to seek it from outward sources.—Rochefoucauld.

Handicraft for Boys and Girls

By A. NEELY HALL and DOROTHY PERKINS

(Copyright by A. Neely Hall.)

A PUSHMOBILE.

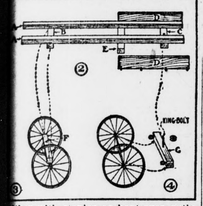
The pushmobile in Fig. 1 is one of the simplest.

If you don't own any wheels, perhaps you can buy some cheaply at a second-hand store, or find a boy with whom you can make a trade for exactly what you want. Get the iron axles, wheels, and nuts and washers that belong to the wheels, if possible. In case an axle is missing, or is too short, go to a blacksmith or machinist and get him to thread a piece of rod of the right length.

Figure 5 shows the completed chassis, and Figs. 2, 3 and 4 show details of its construction. Rails A and connecting cross-pieces B and C (Fig. 2)

are pieces of 2-by-4. The length of rails A will be determined by whatever length you wish to have the car, while that of the cross-pieces will be fixed by the length of the wheel axles. Boards D, nailed to the side of rails A, support the hood framework, and cross-piece E, is a footrest.

If the front and rear wheels are of equal diameter, wooden axles F and G (Figs. 3 and 4) can be of equal thickness; use pieces of 2-by-4. Fasten the iron axles to the wooden axles

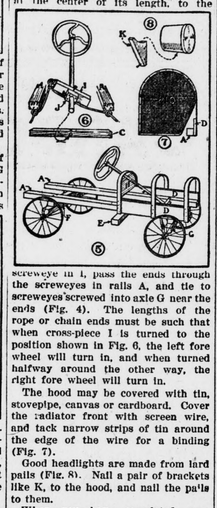


either with staples or bent-over nails. Buy a carriage-bolt long enough to extend through wooden axle G and through cross-piece C (Figs. 2 and 4). For a king-bolt, and with this pivot the front wheels to the front of the chassis.

The hood framework is made of barrel-hoops (Fig. 5); nail the ends of the hoops to side boards D, as shown.

A sewing-machine wheel or wagon wheel may be used for the steering wheel, and a piece of a broom-handle or curtain-pole may be used for the shaft (Figs. 5 and 6). Bore a hole in the inner edge of cross-piece C (Fig. 6) for a pocket for the end of the shaft to fit in; fasten a board in the inner end of the hood framework (H, Fig. 5), and notch its upper edge to support the upper end of the shaft.

Figure 6 shows the method for connecting the steering wheel shaft with the wheels. Cut cross-piece I a trifle shorter than the distance between rails A, and bore a hole through its center for the end of the shaft to fit in; then bore a hole of equal size through a block (J), and nail this block to strip I so the two holes are over one another (Fig. 6). By driving a screw through an edge of strip I, and another through an edge of block J, strip I will be fastened securely to the shaft. Screw a screweye into one end of strip I, and another into the under side of each of the two rails A (Fig. 6); then attach a rope or chain at the center of its length, to the



screweyes in rails A, pass the ends through the screweyes in rails A, and tie to screweyes screwed into axle G near the ends (Fig. 4). The lengths of the rope or chain ends must be such that when cross-piece I is turned to the position shown in Fig. 6, the left fore wheel will turn in, and when turned halfway around the other way, the right fore wheel will turn in.

The hood may be covered with tin, stovepipe, canvas or cardboard. Cover the radiator front with screen wire, and tack narrow strips of tin around the edge of the wire for a binding (Fig. 7).

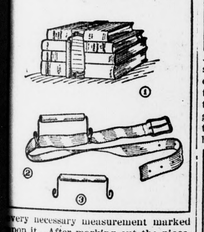
Good headlights are made from lard pails (Fig. 8). Nail a pair of brackets like K, to the hood, and nail the pails to them.

When you have completed your pushmobile give it a couple of coats of paint; putty nail holes, cracks, and joints before you apply the second coat of paint.

HANDY THINGS FOR SCHOOL.

The strap and handle in Fig. 1 requires a strip of canvas 3 inches wide and 24 inches long, folded in half lengthwise, and sewed along the side edges. Get a belt-buckle and sew the end of the strap to it. Finish off the other end of the strap, and punch holes one-half inch apart for a distance of 8 or 10 inches to stick the buckle pin through. The handle is a parcel handle (Fig. 3), one of which you will probably find about the house. Fasten it to the strap with pieces of tape passed around the hooks and the strap, and sewed.

Denim, burlap, cretonne and canvas are good materials to use for book bags. You can make your bag of whatever proportions you want. However, the bag illustrated in Fig. 4 is a standard proportions—14 inches wide and 11 inches deep, and you will want yours of this size, I believe. Fig. 5 is a pattern for cutting, with



very necessary measurement marked upon it. After marking out the piece, cutting it out, and folding where indicated by dotted lines, sew the edges with strong linen thread. Then turn the bag inside out to bring the seams inside. Bind the edges of the flap with braid, and make a shoulder strap of two thicknesses of the same material, sewing together strap along edges.

Fig. 6 shows a unique pencil case made in the form of a pennant. Prepare two pennants 8 inches long and 5 inches wide, using flannel of your school colors, with the initials of your school cut out of flannel and sewed to the face of one pennant. Place the pair of pennants together, and sew along the two long edges. Then with chalk mark off six parallel lines ½ inch apart, along the center of each face of the sewed together pennants, to locate pencil and pen-holder pockets, and stitch along these lines. The triangular pocket that is left at each side of the pen and pencil pockets form holder for eraser.

A good pencil box can be made out of a candy box covered with cretonne or other material (Fig. 7). Punch a hole through both the cover and box at one end (Fig. 8), before putting on the cretonne covering. This opening provides a handy means for slipping pencils and penholders into the box without removing the cover.

A sandpaper block like that in Fig. 9 is handy for quickly rubbing down

the cardboard, or hold it in place by means of rubber bands. The use of rubber bands makes it an easy matter to slip out the piece of sandpaper when you want to replace it with another piece.

BANK OF ENGLAND.

The Bank of England is not a government institution, as is popularly supposed. It was projected by William Paterson, a Scotch merchant, to meet the difficulties experienced by William III in raising supplies for the war against France. Forty merchants subscribed £500,000 towards the sum of £1,200,000 to be lent to the government at 8 per cent. In consideration of the subscribers being incorporated as a bank.

His View of It.

"I wish," said the head of the department, "to let some of my clerks go."

"Why?"

"I have nothing for them to do."

"Huh," said Senator Graball "that's a queer reason for wanting to let clerks go."

What Happened.

Prof.—What happened to Babylon?
Fresh—It fell.
Prof.—What happened to Tyre?
Fresh—It was punctured.

PENNY FINANCIAL BAROMETER.

The cent is the barometer of business, and it is interesting to note that during financial depression a large number of these coins accumulate in the treasury. Even a big storm or a strike will cut down the number of pennies in circulation, for the penny-spending public is indoors, or else forced to save for "rainy days" that threaten. It is a sign of prosperity when large numbers of pennies are in circulation.

Only Once.

"Were you ever a favorite son?"

"Only once," replied Senator Sorghum. "When I was a little boy a man patted me on the head and said 'Sonny, you may be president some day.'"

Two of a Kind.

"I am a self-made man," declared the bank president. "I began as errand boy and worked up."

"That's nothing," said the yegg. "started in a room over a bank and worked my way down."

EFFICIENCY OF FARMER VARIES

Some Are Able to Detect and Eliminate the Low-Paying or Losing Enterprises.

OTHERS SHOULD MAKE MORE

Information Obtained in Keeping Records Is Valuable in Assisting Farmer to Secure a Balanced Business for Next Year.

Farmers, just like other business men, vary widely in the degree of efficiency displayed in running their business. Some are able to analyze the farm business and thus to detect and eliminate the low-paying or losing enterprises. Others, lacking the knowledge of how to make a systematic analysis of the business as a whole, know that their profits are not what they ought to be, without knowing how to go about it to increase them. They may be able to find and correct the obvious errors in the small-sized farm business, but in handling a business of considerable size they often fail to spot the enterprises that are losing money for them. Such men may or may not make money, but at best they fall short of making as much as they might. A farmer may be making a large net profit on his potatoes and losing it all by keeping low-producing cows. Similarly a man may be making money on his cows and losing part of the profit on another enterprise. Hence the paramount importance of records to the farmer.

Farm Returns Studied.

Careful studies made upon a large number of farms enable the office of farm management of the United States department of agriculture to make some interesting statements in this regard. For instance, they find that only 10 per cent—usually less—of the farms studied are managed so as to secure better-than-average returns from all four factors—size of business, yield of crops, live stock, and labor—while from 20 to 30 per cent of the farms considered have only one factor better than the average. It must be understood that no one of these factors will determine success.

The figures given which relate to the labor income will prove most interesting to farm employers. The analysis has reduced the labor cost of farm work to figures. An acre of hay, on an average farm, costs the labor of one man and one horse for a ten-hour day to cut, cure, and harvest it; oats, wheat, and barley, one and a half days of man labor and three of horse;

Without Keeping Records the Farmer Cannot Tell How Much He Is Making and on What Crops.

corn for the silo, three man days and five and a half days for a horse; onions, sold in bunches, require about 93 days of man work to only ten for the horse; dairy cows take 18 days of man time every year and two days of horse time—so on through a list that includes about every item of farm effort. This information is valuable both in securing a balanced business and in assisting the farmer to estimate his labor needs for the coming year. It is contained in a new publication of the department of agriculture, bulletin 1133, "A Method of Analyzing the Farm Business."

Advice of Experts Available.

With the bulletin go blank forms for the purpose of preparing the analysis. Upon these blanks the farmer can inventory his business and then, if he feels unqualified to abide by his own judgment upon the results shown, he may secure the advice of experts by submitting the data gathered to his county agent, or to his state agricultural college, or he may send it directly to the department of agriculture to have the analysis made.

INCREASE YIELD OF ALFALFA

More Tons of Hay Per Acre Can Be Obtained and Blue Grass Kept Out by Harrowing.

Farmers make complaint of alfalfa that it cannot withstand the competition of blue grass, but according to H. D. Hughes of the Iowa experiment station, cultivation with a spring-tooth harrow or disk harrow will eliminate the grass.

"Cultivation is essential to the continued successful growing of alfalfa in Iowa," says Mr. Hughes. "On the fields of the experiment station we get about a ton more hay per acre from cultivated fields than from the uncultivated and we succeed in keeping blue grass out by cultivation. The same kind of report is made by hundreds of farmers who have tried cultivation."

Cultivation should come immediately following the second and third cuttings. If the season is quite wet, the spring-tooth harrow is likely to give better results; otherwise the disk harrow does very well.

Prepare Land for Corn.

Sod land to be used for corn next year should be plowed immediately after haying and cultivated deeply the rest of the summer to reduce the wireworms.

Winning on Its Merit.

Co-operation is winning on merit. It is doing much to increase the profits of agriculture, as is being realized by producers, too, to a greater extent than ever last season.

FARM WOODLAND CAN BE MADE PROFITABLE

Erroneous for Farmers to Saw Up Choice Timber.

Many Valuable Logs Go Into Cross Ties When They Would Bring Much More Money if Sold as Saw Logs—Other Hints.

It is a mistake to saw up choice logs of white oak, ash, cherry and yellow poplar for rough uses at home or to use clear black walnut for gate boards or split up white oak butts for fence posts. This fact is emphasized in many ways in a new publication, "Forestry and the Farm Income," issued by the forest service, United States department of agriculture. Farmers are told that many valuable logs go into cross ties when they would bring the owner much more if sold as saw logs. Likewise, large numbers of rapid growing trees are cut which produce only one small tie, whereas, if left to grow for from three to five years, they would yield more than double the profit. To avoid making

Farmers Should Familiarize Themselves With Uses for Which Timber Is Adapted.

such mistakes, owners of farm woodland should familiarize themselves with the uses for which each kind of timber is best adapted.

Timber that is cut in the late spring and summer months should be handled with special care to avoid injury, because freshly cut wood is then more likely to be attacked by insects and fungi than during the colder months. Seasoning proceeds more rapidly during the warmer season and may cause excessive checking, which is not beneficial to the timber. If rightly handled, posts, poles and logs may be cut at any season without their durability being affected. In no case should wood be allowed to lie in direct contact with the ground. The opportunity for insect attack and decay can be reduced to a minimum by peeling the timbers and open-piling them off the ground in a shaded but dry place. This, however, does not retard checking of the wood.

Logs are sometimes stored under water, in the hot season, to prevent blue stain, checking, insect attack, and decay. Painting the ends of logs with a yellow ochre or barn paint will very materially retard injury by end checking. Painting peeled timbers with creosote will prevent sap stain and decay.

ASCENDING HIVE SAVES WORK

California Beekeeper Invents Apparatus That Does Away With Much Shifting.

In tiered-up hives a great deal of lifting is necessary in shifting frames. Also, though this is a question of dispute among beekeepers, it is maintained that bees do not store as much honey in the "long-ideas" horizontal hive as they do in the higher ones.

To eliminate both difficulties, a California beekeeper had two "ascending" hives constructed as an experiment. He has found them altogether practicable. Each ascending hive holds 21 frames, paced 1½ inches apart and in steps, each raised ⅞ of an inch above the other.

The only objection to this hive is the fact that heat, rising, makes the top part hotter than the lower part instead of keeping the entire hive at a uniform temperature, as can be done in the case of the horizontal hive.

NEW SEEDINGS FOR PASTURE

Sheep Better Suited for Grazing Than Horses or Cattle—Rye Favored for Fall Pasture.

New seedings of clover and timothy should be pastured lightly. Sheep are better suited for this purpose than horses and cattle, but care must be used to prevent them grazing the new meadows too closely. Stalk fields, from which the corn and stover have been removed, furnish considerable feed in the form of grasses, weeds and an occasional stalk and ear of corn. It is well to allow the stock to clean up this feed that would otherwise go to waste. In order to provide more good fall grazing it is a good plan to sow rye at the last working of the corn crop.

BETTER BREEDING MEANS BIGGER BIRDS

Following are average weights of Barred Plymouth Rock grades of the first, second and third generations, government poultry farm, Beltsville, Md.:

Breeding of Poultry—	Gains, Lbs.	Lbs.
Original mongrels	4.40	...
First generation, Barred Rock grades	5.63	1.23
Second generation, Barred Rock graces	6.22	.59
Third generation, Barred Rock grades	6.49	.27

Weights were taken about March 1 each year.

Encouraging Disease.

Where the land is bare and hard the droppings of the birds soon become saturated with foul odors and emanations and open the door to all sorts of sickness.

Squirrel-Tail Grass.

Squirrel-tail grass, one of our common wild grasses, should be watched and removed from pastures or meadows where stock will be pastured, as it is dangerous to them.

GOOD BARNS MEAN CONTENTED COWS

Type of Structure That Contains All Modern Equipment.

VENTILATION IS IMPORTANT

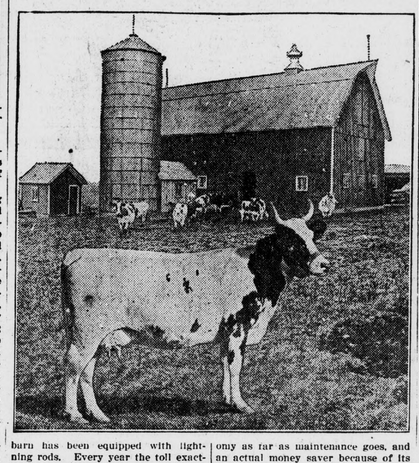
Design Provides Accommodations for Twelve Cows and Six Horses—Well Built and Protected Against the Elements.

By W. A. RADFORD.

Mr. William A. Radford will answer questions and give advice FREE OF COST on all subjects pertaining to the subject of building work on the farm, for the readers of this paper. On account of his wide experience, as Editor, Author and Manufacturer, he is, without doubt, the highest authority on all these subjects. Address all inquiries to William A. Radford, No. 1827 Prairie avenue, Chicago, Ill., and only inclose two-cent stamp for reply.

Whenever you see a good looking herd of healthy cows, you can immediately conclude that they are well fed and housed. Unless a cow is protected by a modern, substantial home, she is not likely to be a heavy producer. For good barns make for contented cows, and contented cows generally lead the field in production.

There are several essential features in the construction of a dairy barn that will aid in increasing production and the barn shown here contains many of those features. In the first place it should be firmly built and protected against the elements of wind, lightning, etc. If you will notice, this



barn has been equipped with lightning rods. Every year the toll exacted by this single element amounts to $8,000,000. And the heaviest loss is found among farm buildings. In a recent report the United States department of agriculture stated that 95 per cent of this loss can be averted by the use of efficient lightning rod systems.

Another important feature of barn construction, and one that has been taken care of in this building, is ventilation. The health of the animals housed in a barn of this kind depends primarily on the supply and kind of air they have to breathe. Unless the barn has been built so as to provide a maximum of fresh air the effect will be noticed in the animals' output. This barn has been fitted with the most modern ventilating system, and all the foul air is drawn off through foul air flues which lead from all parts of the barn.

This barn is a good type, built for farmers who do not have a large herd. It is of plank construction, 34 by 36 feet, and will accommodate 12 cows and six horses. The cow stalls have been placed at one end of the barn, two rows of six facing in on a feed alley. Litter alleys have been built at the ends of the stalls. All of these alleys have been fitted with overhead carriers, systems which relieve this type of work. Farmers who have equipped their barns with these labor-saving systems have found they do not have much trouble keeping their help. The old system of hauling litter away in wheelbarrows was a back-breaking proposition at the best, and did much toward discouraging the

closed tube from which the air has been exhausted, both reach the bottom at the same instant. In other words the force of gravity is constant at any place for all bodies and gives an acceleration of rate of speed to falling bodies of over 32 feet per second.

help, not to mention making the farmer boys dissatisfied and anxious to go to the city.

All of the stalls are of the modern type, being equipped with the latest kind of stanchions and drinking cups. Plenty of good fresh water will help increase the milk flow. The drinking cup also does away with the old system of leading the cows to a trough, a task which was not very attractive in the cold winter season.

At the other end of this barn are located the six horse stalls with a feed alley running along one end. Two grain bins at the far corner provide storage facilities from whence a supply can be drawn for the daily rations.

At the end of the feeding alley running between the cow stalls is a feed room where the feed can be ground and loaded onto the carriers for distribution among the various stalls. The silo is next to this feed room. It is built of wooden staves, a type that is very popular in some sections of the country. The staves are interlocked so as to form a continuous wall. The lightning rod at the top is designed to protect it from fire. A short distance from the silo is a small milk house equipped with a cooler where the milk can be kept in good condition until it is hauled to the factory. This building is a very convenient asset to the farm building group.

A large hay mow above provides plenty of space in the barn for feed storage. For the farmer who has about ten to a dozen cows and a few horses this type of barn is very admirably suited, and should prove to be an efficient unit in his plant. It does not have any waste space, but has all the modern conveniences of the large ultra-modern dairy farm. Constructed of the best material in the first place, it will prove an economy as far as maintenance goes, and an actual money saver because of its effective help in keeping up the morale of the help and health of the animals.

The most important building to the farmer is the dairy barn because in it he houses his all-year source of income. Unless he gives it his careful attention he is liable to pay heavily for his neglect. It is better to build well then suffer later even though the expense may be somewhat greater. The initial cost is not the important factor. It is the upkeep and a good substantial barn of this type does not require as much expense as a poorly constructed building.

Speed of Falling Bodies.

Galileo first put the relative rates of speed of falling bodies to the test by dropping various weights from the top of the leaning tower of Pisa in Italy. He found that when let fall simultaneously they reached the ground almost at the same time, whatever their size or weight; any differences shown being due to the resistance of the air. If a coin and a feather are dropped together in a

The Case.

"In these days if you want a home, sweet home, you must see sharp."

"Yes, or it will be a flat."

In the Shadow.

"Do you know Quarterly?"

"Not at all; I've only met him when he was with his wife."—Life.

His Nature.

"That man is always thinking of apartments." "I suppose he is of a room-inating disposition."

EAGLE TAKES RIDE ON SALMON'S BACK

This Veracious Tale Is Vouched For by Every Man Aboard the Roosevelt.

Seattle, Wash.—Every man aboard the schooner Roosevelt, from the master to the cook, in from a recent voyage, said they would take an oath that they saw a huge bald eagle take a wild ride on a salmon's back in the stretch of water between Cape Mudge and Seymour Narrows, Gulf of Georgia. And they brought the eagle to Seattle to prove it.

The Roosevelt was on its way to Seattle from the fishing banks in Hecate strait. Shortly after passing Seymour Narrows members of the crew said they noticed a bald eagle flying

Drove His Sharp Talons Into the Fish's Back.

close to the water, near the vessel. As they watched the big bird skimming near the surface, a spring salmon, estimated to weigh about twenty pounds, leaped clear of the swift-moving current. Quick as a flash the eagle drove his sharp talons into the fish's back.

There was a great splash as the big springer dived, taking the eagle beneath the surface. All hands rushed to the rail to watch the struggle. Three times, they said, the fish and the bird disappeared in the water while the Roosevelt steered a course close behind them.

Finally the eagle loosened its hold on the salmon and flopped over on the surface of the water completely exhausted. It had put up a game fight but had lost its prey. The crew of the Roosevelt pulled the bird aboard with a boat hook. The eagle was nearly drowned, but on deck it soon recovered and showed fight.

While the battle between the bird and the fish was in progress two other eagles, the Roosevelt's men said, flew around the vicinity screaming loudly. Capt. Barney Pedersan presented the captured eagle to one of the local public parks.

LOCKS SELF UP WITH BEAR

Former Circus Animal Trainer Did It in Bravado but Was Bitten.

Cumberland, Md.—Charles W. Miller, a former circus animal trainer, was badly injured by a bear at the zoo of John W. Snyder the other day, after he had locked himself in the cage to show a Pittsburgh party that the animal was afraid of him.

As soon as the bear heard the lock on the cage door click he pounced on Miller, knocking him down twice, biting him through the knee and the muscles of one arm to the bone.

Doctor Mitchell, who was a member of the party watching the attack, engaged the bear's attention from outside of the cage. This, aided by the use of a club that Miller had got hold of, prevented the animal from tearing his trainer to shreds.

The bear was secured by Snyder at Connellsville, where it had been on exhibition several years.

Two Suitors Forced Girl to Pick One as Husband

Miss Margaret Corcoran of Minneapolis, Minn., was forced to make her choice between two sweethearts, and was married at once to Howard Rebeck. Donald Walp and Rebeck visited her home, each armed with a marriage license. Margaret fainted. Her parents favored Donald. As the men glared at each other the girl recovered, picked up Walp's license, tearing it to shreds. Then she fainted again. When she finally recovered her parents assented to her choice and the ceremony was performed.

Mad Dog Broke Up Church Party.

Dunbar, Pa.—Snapping in all directions, a mad dog raced into a crowd of persons in attendance at an entertainment in the First Presbyterian church. In disrupting the party, the dog savagely bit Earl Anderson of that city. Before he was shot the dog bit several other dogs and a number of residents.

Exploding Soda Fountain Killed Boy.

Salina, Kan.—When an open air soda fountain he was charging exploded, Carl Ross, twenty-two years old, was hurled high in the air and killed.

Wife Slayer Hanged by Mob.

Twenty automobiles loaded with men mobbed the jail and, seizing William Bennett, Jr., who had begun serving a life-term for the murder of his wife, hanged him from a beam held between the forks of three trees on the county poor farm.

Slew Man Beating Husband in Fight.

St. Louis.—Mrs. Ida Shea couldn't stand to see her husband whipped in a fist fight, so she shot and killed Frank Sparks who was getting the better of the fistic argument.

ON THE FUNNY SIDE

MEANEST YET.

Sales Manager—Well, Jobbie, how did the last prospect turn out?

Vacuum Cleaner Canvasser—The original Mrs. Gaspard, the well known miser's worst half! That dame let me demonstrate the machine till I made her best rug look like new and then all I got was a demand for a quarter of a dollar to pay for the electricity she estimated I'd used."

Grasping the Opportunity.

"It's fierce how my memory is weakening; it's getting worse every day. Tomorrow morning I won't be able to remember what I've been doing today."

"Is that so? It's really too bad. Say, listen; can you let me have fifty bucks for about five days?"

No Style to Them.

Mrs. Warbucks (trying to select a gift for her son)—Why, all of these fiddles look alike to me.

Salesman—But they differ greatly in tone, madam, to say nothing of price.

Mrs. Warbucks—Oh, hang the tone and price. Haven't you something in a period design?

Something Nifty.

"Had an unusual request from one of our new rich today."

"What was that?"

"Lady wanted a gold-mounted fly swatter."

Easily Understood.

"Why was it the lawyer couldn't pump the witness?"

"I suppose it was because he couldn't handle him."

NOT WORRIED

"Why did you mix in? Those people are nobodies."

"Maybe so, but when enough nobodies get together they manage to have a pretty good time."

Modern Matches.

A truly patient man we like
Who doesn't care a bit
How many matches he must strike
Before he gets one lit.

The Difference.

"Love will take all or nothing."

"Its attachment, then, is not so exacting as a sheriff's, for that will take what it can get."

The Obvious Instrument.

"Why do they always try to 'break' a deadlock?"

"How else could they manage?"

"They might try a skeleton key."

Capitulation.

"You can't refuse me."

"Sir!"

"I have two motorcars."

"Other young men have motorcars."

"My income is $10,000 a year."

"That isn't unusual nowadays."

"And I have a five-year lease on a desirable apartment."

"Augustus, I'm yours!"

Naturally.

"Let me give you one piece of advice, young man."

"What is it, sir?"

"You are apt to make a monkey of yourself when you try to ape other people."

Injudicious Solicitude.

"Do you know of a good cure for a cold? My wife is so hoarse she can't speak above a whisper."

"You fool; can't you let well enough alone?"

Done For.

"Does your daughter sing the popular songs?"

"Yes, but I fear that ends their popularity, at least among the neighbors."

Magnified Importance.

"Why do the police insist on referring to you as a master mind?" said the contemptuous colleague in crime.

"I dunno," answered Bill the Burg, "unless it's because I'm the only regular crook the police have captured in a long time and they want to make as much fuss over me as possible."

Not Fancy Ones.

"Are these mushrooms of the edible variety?"

"No'm, they're just the common kind, but they're all right to eat."

An International Episode.

"What is your trouble with this man?"

"He got in Dutch with me with his fine Italian hand, then when I finally got him, he took French leave. But when I catch him, I'll make him walk Spanish."

The Regular Artists.

"He's an artist."

"What's his line?"

"Why, he paints pictures."

"Oh, shucks. I thought he was in vaudeville or the movies."

A Friend of George's.

Teacher in primary class: Do any of you little folks know who George Washington was?

Tommy: I don't know him myself, but he is an old friend of my dad's.—Cartoons Magazine.

Their Likeness.

"Bananas, in one way, are like wedding guests."

"How is that?"

"They are always ready to throw the slipper after the paring comes off."